

Amendments to the Claims:

1-57. (canceled)

58. (currently amended) An isolated nucleic acid encoding a polypeptide having at least 80% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);

(b) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;

(c) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);

(d) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;

~~(e) — the nucleic acid sequence shown in Figure 23 (SEQ ID NO:58);~~

[[f)] (e) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:58 shown in Figure 23 (SEQ ID NO:58); or

[[g)] (f) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 209616, wherein the encoded polypeptide induces chondrocyte redifferentiation.

59. (currently amended) The isolated nucleic acid of Claim 58 encoding a polypeptide having at least 85% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);

(b) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;

(c) ~~a nucleic acid sequence encoding the~~ amino acid sequence of the extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);

(d) ~~a nucleic acid sequence encoding the amino acid sequence of the~~ extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;

~~(e) — the nucleic acid sequence shown in Figure 23 (SEQ ID NO:58);~~

[[(f)]] (e) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:58 shown in Figure 23 (SEQ ID NO:58); or

[[(g)]] (f) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 209616, wherein the encoded polypeptide induces chondrocyte redifferentiation.

60. (currently amended) The isolated nucleic acid of Claim 58 encoding a polypeptide having at least 90% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the amino acid sequence of the~~ polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);

(b) ~~a nucleic acid sequence encoding the amino acid sequence of the~~ polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;

(c) ~~a nucleic acid sequence encoding the amino acid sequence of the~~ extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);

(d) ~~a nucleic acid sequence encoding the amino acid sequence of the~~ extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;

~~(e) — the nucleic acid sequence shown in Figure 23 (SEQ ID NO:58);~~

[[(f)]] (e) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:58 shown in Figure 23 (SEQ ID NO:58); or

[[(g)]] (f) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 209616, wherein the encoded polypeptide induces chondrocyte redifferentiation.

61. (currently amended) The isolated nucleic acid of Claim 58 encoding a polypeptide having at least 95% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the amino acid sequence of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);~~

(b) ~~a nucleic acid sequence encoding the amino acid sequence of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;~~

(c) ~~a nucleic acid sequence encoding the amino acid sequence of the extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);~~

(d) ~~a nucleic acid sequence encoding the amino acid sequence of the extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;~~

~~(e) the nucleic acid sequence shown in Figure 23 (SEQ ID NO:58);~~

~~[[f]] (e) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:58 shown in Figure 23 (SEQ ID NO:58); or~~

~~[[g]] (f) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 209616, wherein the encoded polypeptide induces chondrocyte redifferentiation.~~

62. (currently amended) The isolated nucleic acid of Claim 58 encoding a polypeptide having at least 99% ~~nucleic acid~~ sequence identity to:

(a) ~~a nucleic acid sequence encoding the amino acid sequence of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);~~

(b) ~~a nucleic acid sequence encoding the amino acid sequence of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;~~

(c) ~~a nucleic acid sequence encoding the amino acid sequence of the extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);~~

(d) ~~a nucleic acid sequence encoding the amino acid sequence of the extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;~~

~~(e) the nucleic acid sequence shown in Figure 23 (SEQ ID NO:58);~~

[[(f)] (e) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:58 shown in Figure 23 (SEQ ID NO:58); or

[[(g)] (f) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 209616,
wherein the encoded polypeptide induces chondrocyte redifferentiation.

63. (currently amended) An isolated nucleic acid comprising:

(a) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59)

(b) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;

(c) a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59);

(d) a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide;

~~(e) the nucleic acid sequence shown in Figure 23 (SEQ ID NO:58);~~

[[(f)] (e) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:58 shown in Figure 23 (SEQ ID NO:58); or

[[(g)] (f) the amino acid sequence of the polypeptide encoded by the full-length coding sequence of the cDNA deposited under ATCC accession number 209616.

64. (currently amended) The isolated nucleic acid of Claim 63 comprising a nucleic acid sequence encoding the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59).

65. (currently amended) The isolated nucleic acid of Claim 63 comprising a nucleic acid sequence encoding the polypeptide of SEQ ID NO:59 shown in Figure 24 (SEQ ID NO:59), lacking its associated signal peptide.

66. (currently amended) The isolated nucleic acid of Claim 63 comprising a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:59 ~~shown in Figure 24 (SEQ ID NO:59).~~

67. (currently amended) The isolated nucleic acid of Claim 63 comprising a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:59 ~~shown in Figure 24 (SEQ ID NO:59),~~ lacking its associated signal peptide.

68. (currently amended) The isolated nucleic acid of Claim 63 comprising the nucleic acid sequence of SEQ ID NO:58 ~~shown in Figure 23 (SEQ ID NO:58).~~

69. (currently amended) The isolated nucleic acid of Claim 63 comprising the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:58 ~~shown in Figure 23 (SEQ ID NO:58).~~

70. (previously presented) The isolated nucleic acid of Claim 63 comprising the full-length coding sequence of the cDNA deposited under ATCC accession number 209616.

71. (canceled)

72. (canceled)

73. (canceled)

74. (previously presented) A vector comprising the nucleic acid of Claim 58.

75. (previously presented) The vector of Claim 74, wherein said nucleic acid is operably linked to control sequences recognized by a host cell transformed with the vector.

76. (currently amended) An isolated host cell comprising the vector of Claim 74.

77. (currently amended) The isolated host cell of Claim 76, wherein said cell is a CHO cell, an *E. coli* or a yeast cell.

78. (new) An isolated nucleic acid molecule consisting of an at least 30 nucleotide fragment of the nucleic acid sequence of SEQ ID NO:58, or a complement thereof, that specifically hybridizes under stringent conditions to:

- (a) the nucleic acid sequence of SEQ ID NO:58 or a complement thereof;
- (b) the full-length coding sequence of the cDNA deposited under ATCC accession number 209616 or a complement thereof;

wherein, said stringent conditions use 50% formamide, 5 x SSC, 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5x Denhardt's solution, sonicated salmon sperm DNA (50 µg/ml), 0.1% SDS, and 10% dextran sulfate at 42 °C, with washes at 42 °C in 0.2 x SSC and 50% formamide at 55 °C, followed by a wash comprising of 0.1 x SSC containing EDTA at 55 °C, wherein said isolated nucleic acid molecule is suitable for use as a primer or probe.

79. (new) The isolated nucleic acid molecule of Claim 78 that is at least 50 nucleotides in length.

80. (new) The isolated nucleic acid molecule of Claim 78 that is at least 60 nucleotides in length.

81. (new) The isolated nucleic acid molecule of Claim 78 that is at least 70 nucleotides in length.

82. (new) The isolated nucleic acid molecule of Claim 78 that is at least 80 nucleotides in length.

83. (new) The isolated nucleic acid molecule of Claim 78 that is at least 90 nucleotides in length.

84. (new) The isolated nucleic acid molecule of Claim 78 that is at least 100 nucleotides in length.